

Mine Safety and Health Admin., Labor

§ 75.701-3

throughout and shall be grounded by methods approved by an authorized representative of the Secretary.

§ 75.700-1 Approved methods of grounding.

Metallic sheaths, armors and conduits in resistance grounded systems where the enclosed conductors are a part of the system will be approved if a solid connection is made to the neutral conductor; in all other systems, the following methods of grounding will be approved:

(a) A solid connection to a borehole casing having low resistance to earth;

(b) A solid connection to metal waterlines having low resistance to earth;

(c) A solid connection to a grounding conductor, other than the neutral conductor of a resistance grounded system, extending to a low resistance ground field located on the surface;

(d) Any other method of grounding, approved by an authorized representative of the Secretary, which ensures that there is no difference in potential between such metallic enclosures and the earth.

§ 75.701 Grounding metallic frames, casings, and other enclosures of electric equipment.

[STATUTORY PROVISIONS]

Metallic frames, casings, and other enclosures of electric equipment that can become "alive" through failure of insulation or by contact with energized parts shall be grounded by methods approved by an authorized representative of the Secretary.

§ 75.701-1 Approved methods of grounding of equipment receiving power from ungrounded alternating current power systems.

For purposes of grounding metallic frames, casings and other enclosures of equipment receiving power from ungrounded alternating current power systems, the following methods of grounding will be approved:

(a) A solid connection between the metallic frame, casing, or other metal enclosure and the grounded metallic sheath, armor, or conduit enclosing the power conductor feeding the electrical equipment enclosed;

(b) A solid connection to a borehole casing having low resistance to earth;

(c) A solid connection to metal waterlines having low resistance to earth;

(d) A solid connection to a grounding conductor extending to a low resistance ground field located on the surface;

(e) Any other method of grounding, approved by an authorized representative of the Secretary, which ensures that there is no difference in potential between such metal enclosures and the earth.

§ 75.701-2 Approved method of grounding metallic frames, casings and other enclosures receiving power from single-phase 110-220-volt circuit.

In instances where single-phase 110-220-volt circuits are used to feed electrical equipment, the only method of grounding that will be approved is the connection of all metallic frames, casings and other enclosures of such equipment to a separate grounding conductor which establishes a continuous connection to a grounded center tap of the transformer.

§ 75.701-3 Approved methods of grounding metallic frames, casings and other enclosures of electric equipment receiving power from direct current power systems with one polarity grounded.

For the purpose of grounding metallic frames, casings and enclosures of any electric equipment or device-receiving power from a direct-current power system with one polarity grounded, the following methods of grounding will be approved:

(a) A solid connection to the mine track;

(b) A solid connection to the grounded power conductor of the system;

(c) Silicon diode grounding; however, this method shall be employed only when such devices are installed in accordance with the requirements set forth in paragraph (d) of § 75.703-3; and

(d) Any other method, approved by an authorized representative of the Secretary, which insures that there is no difference in potential between such metal enclosures and the earth.